REMARKS

The Office Action mailed August 3, 2000 has been reviewed and carefully considered. Claim 6 has been amended. Claims 6-8 and 10-13 are pending in this application, with claim 6 being the only independent claim. Reconsideration of the above-identified application, as amended, and in view of the following remarks is respectfully requested.

Claims 6-8 and 10-13 stand rejected under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. 5,657,814 (Maebara).

Before discussing the prior art and the Examiner's rejections of the claims in view of the prior art, a brief summary of the present invention is appropriate. The present invention is directed to a process for producing hot-rolled steel strip from a continuously cast precursor strip. The present invention receives the continuous precursor strip at a first deformation stage and rolls the continuous precursor strip through the first deformation stage to produce an intermediate strip. The continuous intermediate strip is then coiled in an intermediate coil. That is, the entire output of a complete casting sequence is coiled on an intermediate coil after the first deformation stage. The intermediate coil is then uncoiled and fed through a second deformation stage to form a finished strip. The finished strip is severed into sections having a desired finished coil weight and each section is then coiled to produce a plurality of finished coils.

Independent claim 6 has been amended to clarify that the continuous precursor material contains the material of a complete casting sequence (see original specification at page 3, lines 7-10) and that the intermediate material is coiled without cutting (see original specification at page 3, lines 1-3). The advantage of this inventive method is that only one continous strip is passed through the rolls, thereby eliminating problems associated with introducing the ends of multiple strips into the rolls.

It is respectfully submitted that Maebara fails to disclose the steps of coiling the intermediate strip (or any other strip) of a complete casting sequence without cutting. In contrast to the present invention, Maebara discloses a conventional method for hot-rolling steel strip in which the precursor material is severed into sections having the finished coil weight by a slab shearing machine 14 before being fed through the roll stands 18 for being reduced to the desired thickness. Most significantly, Maebara shears the steel strip into sections before the first coiling step. Therefore, Maebara fails to disclose coiling the entire output of a continuous casting sequence in an intermediate coil without cutting.

The reason Maebara severs the continuously cast precursor material is that the coil reels known by those skilled in the art are designed to hold only the finished coil weights, not the entire casting sequence of the casting plant.

The shearing of the material into sections having the finished coil weight before coiling the strip is evidenced in each prior art reference of record. For example, U.S. Patent No. 5,832,985 (Pleschuitschnigg et al.) discloses a process for producing steel strip in which shears 17 cut the precursor material before it is first coiled and thereby fails to disclose coiling the entire output of a continuous casting sequence on an intermediate coil without cutting.

U.S. Patent No. 4,976,024 (Kimura) discloses a method for rolling a strip directly connected to a continuous casting machine. Kimura discloses a shear 14 for cutting the precursor material before it is coiled and does not further cut the material before the finished product is coiled. A further shearing device 60 is used for emergencies (see col. 6, lines 1-12 of Kimura). Accordingly, the shear 14 cut the material into sections having the finished coil weight.

U.S. Patent No. 5,435,164 (Di Giusto et al.) discloses an apparatus and method for making hot rolled material. This reference also shows a shears 12 for severing the slab 20

into sections. Each section is rolled through roll stands and then coiled. Since there are no further shears disclosed, the shears 12 cut the slab 20 into sections of the finished coil weight.

U.S. Patent No. 5,554,233 (Heitmann et al.) discloses a method for producing a hot rolled bar. This reference does not disclose shears. However, the input to the rolls is a billet, i.e., not a continuous cast precursor material.

Finally, U.S. Patent No. 4,885,041 (den Hartog et al.) discloses a method for making steel strip in which shears 16 are arranged for cutting the strip before the coil 17. This reference also fails to disclose an intermediate coil in which the entire output of a continuous casting sequence is coiled.

These references, found by the Examiner in the search for prior art, all disclose that the strip being produced is cut into sections before being coiled. Accordingly, these reference provide evidence that it is not obvious to coil the entire output of a continuous casting sequence on one coil reel. Otherwise, the advantages of doing so would have been used in Maebara. Indeed, since each of these references teaches that the material must be cut into sections before being coiled, these references teach away from the limitations of claim 6 which require that the continuous precursor material is rolled for forming a continuous intermediate strip and that the continuous intermediate strip is coiled without being severed. Accordingly, it is respectfully submitted that independent claim 6 is allowable over Maebara.

Claims 7-8 and 10-13, being dependent on independent claim 6, are allowable for the same reasons that independent claim 6 is allowable.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no additional fees or charges are currently due. However, if any additional fees or charges are required at this time in connection with the application, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By _____

Thomas C. Pontani
Reg. No. 29,763
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

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